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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,990	07/28/2003	Opher Kahn	42.P8917D	7335

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08/15/2005

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EXAMINER

MCLEAN MAYO, KIMBERLY N

ART UNIT

PAPER NUMBER

2187

DATE MAILED: 08/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/628,990

Applicant(s)

KAHN ET AL.

Examiner

Kimberly N. McLean-Mayo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/11/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. The enclosed detailed action is in response to the Information Disclosure Statements submitted on July 28, 2003 and July 19, 2004 and the Application submitted on July 28, 2003.

#### ***Specification***

2. The disclosure is objected to because of the following informalities:

Page 1, section [0001] of the specification should state, "claims priority" ... U.S. Patent Application Serial NO. 09/667,649 filed September 22, 2000, now U.S. Patent 6,662,278. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claimed features recite increasing and decreasing the memory bandwidth when accesses to memory by the memory controller are less than the original percentage. This feature is inoperable; how can the bandwidth be increased and decreased at the same time?

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NOTE: In light of the above 112 rejection, the claims have been interpreted by the Examiner to mean increasing or decreasing the memory bandwidth when accesses to the memory controller are less than the original percentage

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2, 4, 5-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Bogin et al. (USPN: 5,935,685).

Regarding claims 1 and 5, Bogin discloses allocating an original percentage of bandwidth or number of accesses to memory by a memory controller (C 4, L 16-22; bandwidth of device prior to activation of the throttling regime); increasing the bandwidth or number of accesses allocated to the memory controller to a percentage higher than the original percentage of bandwidth or number of accesses allocated when accesses to memory by the memory controller are less than the original percentage of bandwidth or number of accesses allocated to the memory controller or decreasing the bandwidth or number of accesses allocated to the memory controller to a percentage lower than an original bandwidth or number of accesses allocated when accesses to memory by the memory controller are less than the original percentage of bandwidth or number of accesses allocated to the memory controller (C 4, L 37-45, L 54-59;)

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Regarding claims 2 and 6, Bogin discloses setting a window of time to monitor the percentage of bandwidth or number of accesses to memory by the memory controller (Figure 3B, Reference 300; C 5, L 11-19); and measuring the percentage of bandwidth used or number of accesses to memory by the memory controller during the window of time (C 5, L 19-31).

Regarding claims 4 and 8, Bogin discloses applying a mask to decrease the bandwidth or number of accesses allocated to the memory controller to a percentage higher than the original percentage of bandwidth or number of accesses allocated when accesses to memory by the memory controller are less than the original percentage of bandwidth or number of accesses allocated to the memory controller (C 7, L 63-67; C 8, L 1-12).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bogin (USPN: 5,953,685) in view of Woo (USPN: 6,021,076).

Bogin discloses the limitations cited above, however, Bogin does not disclose applying a mask to increase the bandwidth or number of accesses allocated to the memory controller to a percentage higher than the original percentage of bandwidth or number of accesses allocated when accesses

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to memory by the memory controller are less than the original percentage of bandwidth or number of accesses allocated to the memory controller. However Woo teaches the concept of increasing the percentage of memory bandwidth or the number of memory accesses allocated to the memory controller when memory accesses by the memory controller are less than the percentage of memory bandwidth or the number of memory accesses allocated to the memory controller (C 9, L 60-67; C 10, L 1-10; C 6, L 1-15 – if the temperature [and thus the corresponding operating conditions [bandwidth] of the memory of the device at that instance] is below a threshold, thermal regulation is disabled which effectively increases the memory bandwidth). This feature allows the system to perform optimally when the temperature of the device is within a desired range. Hence it would have been obvious to one of ordinary skill in the art to use the teachings of Woo with the teachings of Bogin for the desirable purpose of optimization and to achieve maximum performance.

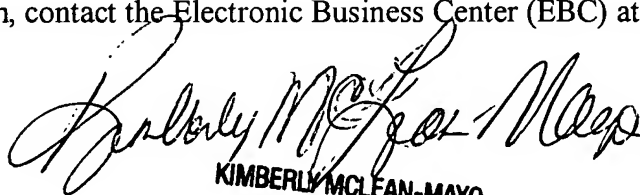
### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly N. McLean-Mayo whose telephone number is 703-308-9592. The examiner can normally be reached on Tues, Wed, Thr (10:00 - 6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on 703-308-1756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**KIMBERLY MCLEAN-MAYO**  
**PRIMARY EXAMINER**

Kimberly N. McLean-Mayo  
Examiner  
Art Unit 2187

KNM

August 11, 2005